

Table C3. Sum of major fuel consumption and expenditures, 2012

			All buildings	Sum of major fuel consumption	Sum of major fuel expenditures
	Number of buildings (thousand)	Total floorspace (million square feet)	Floorspace per building (thousand square feet)	Total (trillion Btu)	Total (million dollars)
All buildings	5,557	87,093	15.7	6,963	149,059
Building floorspace (square feet)					
1,001 to 5,000	2,777	8,041	2.9	723	16,343
5,001 to 10,000	1,229	8,900	7.2	646	14,230
10,001 to 25,000	884	14,105	16.0	876	19,921
25,001 to 50,000	332	11,917	35.9	823	17,299
50,001 to 100,000	199	13,918	69.9	1,067	22,523
100,001 to 200,000	90	12,415	137.9	1,035	21,907
200,001 to 500,000	38	10,724	284.2	1,026	20,880
Over 500,000	8	7,074	885.0	767	15,956
Principal building activity					
Education	389	12,239	31.5	842	16,819
Food sales	177	1,252	7.1	262	6,167
Food service	380	1,819	4.8	514	9,956
Health care	157	4,155	26.5	718	13,072
Inpatient	10	2,374	247.8	549	9,373
Outpatient	147	1,781	12.1	169	3,699
Lodging	158	5,826	36.9	564	10,997
Mercantile	602	11,330	18.8	1,008	22,704
Retail (other than mall)	438	5,439	12.4	364	8,982
Enclosed and strip malls	164	5,890	35.9	644	13,722
Office	1,012	15,952	15.8	1,241	30,781
Public assembly	352	5,559	15.8	480	10,217
Public order and safety	84	1,440	17.2	133	2,766
Religious worship	412	4,557	11.1	173	3,338
Service	619	4,630	7.5	272	5,614
Warehouse and storage	796	13,077	16.4	429	9,696
Other	125	2,002	16.0	286	5,958
Vacant	296	3,256	11.0	41	974
Year constructed					
Before 1920	362	3,983	11.0	238	5,194
1920 to 1945	488	6,025	12.3	418	9,699
1946 to 1959	599	7,381	12.3	537	11,016
1960 to 1969	639	10,362	16.2	902	18,387
1970 to 1979	684	10,846	15.9	1,012	20,601
1980 to 1989	915	15,230	16.6	1,164	26,174
1990 to 1999	845	13,803	16.3	1,102	23,763
2000 to 2003	375	7,215	19.2	579	12,599
2004 to 2007	347	6,524	18.8	528	11,308
2008 to 2012	303	5,723	18.9	484	10,318

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All buildings	5,557	87,093	15.7	6,963	149,059
Census region and division					
Northeast	805	15,534	19.3	1,459	34,917
New England	302	4,302	14.3	368	9,321
Middle Atlantic	504	11,232	22.3	1,092	25,596
Midwest	1,237	18,919	15.3	1,566	27,379
East North Central	735	12,742	17.3	1,131	19,718
West North Central	502	6,178	12.3	435	7,661
South	2,247	34,279	15.3	2,566	54,780
South Atlantic	1,091	17,981	16.5	1,358	31,285
East South Central	370	4,904	13.3	369	7,478
West South Central	786	11,394	14.5	839	16,017
West	1,267	18,360	14.5	1,372	31,983
Mountain	338	4,981	14.7	417	7,695
Pacific	929	13,379	14.4	954	24,288
Climate region¹					
Very cold/Cold	2,031	31,898	15.7	2,746	52,579
Mixed-humid	1,743	27,873	16.0	2,270	49,440
Mixed-dry/Hot-dry	837	12,037	14.4	804	20,480
Hot-humid	799	12,831	16.1	947	21,883
Marine	147	2,454	16.7	197	4,677
Number of floors					
One	3,836	39,809	10.4	2,831	62,436
Two	1,158	20,206	17.5	1,460	31,065
Three	374	8,140	21.8	668	14,050
Four to nine	177	13,535	76.6	1,432	28,310
Ten or more	13	5,404	429.2	572	13,198
Elevators and escalators (more than one may apply)					
Any elevators	405	32,120	79.3	3,183	66,070
Number of elevators					
One	272	11,158	41.1	884	17,859
Two to five	118	12,817	109.0	1,242	26,106
Six or more	16	8,145	506.8	1,058	22,105
Any escalators	10	3,654	377.5	377	8,114
Number of workers (main shift)					
Fewer than 5	2,892	17,751	6.1	756	16,883
5 to 9	1,085	8,973	8.3	598	13,631
10 to 19	731	9,623	13.2	772	16,355
20 to 49	513	14,514	28.3	1,188	25,414
50 to 99	206	13,476	65.6	1,150	23,977
100 to 249	93	10,941	117.1	1,058	21,742
250 or more	37	11,815	318.3	1,441	31,057

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All buildings	5,557	87,093	15.7	6,963	149,059
Weekly operating hours					
Fewer than 40	1,149	8,220	7.2	229	4,800
40 to 48	1,346	15,828	11.8	832	19,174
49 to 60	1,244	20,529	16.5	1,258	28,917
61 to 84	764	15,867	20.8	1,370	30,071
85 to 167	479	9,395	19.6	1,098	22,874
Open continuously	575	17,253	30.0	2,177	43,224
Ownership and occupancy					
Nongovernment owned	4,781	67,550	14.1	5,375	116,648
Owner occupied	2,466	30,637	12.4	2,615	53,282
Leased to tenant(s)	1,745	26,115	15.0	2,041	47,461
Owner occupied and leased	349	8,873	25.4	709	15,672
Unoccupied	221	1,925	8.7	10	233
Government owned	776	19,543	25.2	1,588	32,411
Federal	33	1,573	47.7	137	3,098
State	185	5,539	30.0	555	10,649
Local	558	12,431	22.3	896	18,664
Party responsible for operation and maintenance of energy systems					
Building owner	4,715	73,702	15.6	5,808	123,188
Business owner or tenant	724	11,309	15.6	983	21,926
Property management	54	1,250	23.0	96	2,229
Other	64	832	12.9	75	1,715
Provider of direct input on energy-related equipment purchases					
Building owner	4,876	76,271	15.6	5,984	127,298
Business owner or tenant	540	8,256	15.3	766	16,900
Property management	35	880	25.5	61	1,499
Other	106	1,686	15.9	153	3,361
Number of establishments					
One	4,205	54,994	13.1	4,485	93,466
2 to 5	862	17,756	20.6	1,400	30,532
6 to 10	147	4,425	30.1	364	8,231
11 to 20	68	3,704	54.8	355	8,081
More than 20	27	3,821	140.9	347	8,483
Currently unoccupied	248	2,393	9.6	13	266

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All buildings	5,557	87,093	15.7	6,963	149,059
Predominant exterior wall material					
Brick, stone, or stucco	2,312	40,463	17.5	3,457	72,280
Concrete (block or poured)	1,121	20,726	18.5	1,720	37,773
Concrete panels	210	8,693	41.4	664	14,004
Siding or shingles	905	5,750	6.4	400	9,387
Metal panels	933	8,673	9.3	428	9,203
Window glass	17	1,340	78.6	170	3,634
Other	37	856	23.0	79	1,813
No one major type	21	592	27.6	45	965
Predominant roof material					
Metal surfacing	1,672	15,916	9.5	865	19,379
Synthetic or rubber	911	25,817	28.3	2,442	49,992
Built-up	836	21,835	26.1	1,862	39,989
Slate or tile shingles	406	4,306	10.6	371	8,128
Wooden materials (including shingles)	157	1,139	7.3	92	1,885
Asphalt, fiberglass, or other shingles	1,483	15,104	10.2	1,105	24,366
Concrete	51	1,642	32.2	132	3,275
Other	24	678	28.6	58	1,259
No one major type	18	657	36.4	35	787
Roof characteristics					
Roof tilt					
Flat	1,960	49,623	25.3	4,476	94,637
Shallow pitch	2,148	23,853	11.1	1,597	35,264
Steeper pitch	1,449	13,617	9.4	890	19,158
Cool roof	740	19,630	26.5	1,837	38,636

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All buildings	5,557	87,093	15.7	6,963	149,059
Renovations in buildings constructed before 2008 (more than one may apply)					
Any type of renovation	2,094	42,216	20.2	3,762	79,130
Addition or annex	444	13,022	29.3	1,292	24,824
Reduction in floorspace	71	1,753	24.6	226	4,708
Roof replacement	987	20,917	21.2	1,986	40,812
Exterior wall replacement	194	4,230	21.8	399	8,144
Interior wall reconfiguration	889	21,340	24.0	2,056	43,350
Window replacement	560	12,265	21.9	1,090	22,649
HVAC equipment upgrade	1,101	26,779	24.3	2,545	53,298
Lighting upgrade	982	25,503	26.0	2,440	50,024
Electrical upgrade	747	16,160	21.6	1,608	33,090
Plumbing system upgrade	644	13,828	21.5	1,397	28,545
Insulation upgrade	382	7,607	19.9	771	15,243
Fire, safety, or security upgrade	616	17,196	27.9	1,685	35,026
Structural upgrade	152	3,913	25.8	424	8,258
Other	39	848	21.7	69	1,701
No renovations	3,160	39,154	12.4	2,718	59,611
Buildings constructed 2008 or later	303	5,723	18.9	484	10,318
Energy sources (more than one may apply)					
Electricity	5,234	84,869	16.2	6,963	149,059
Natural gas	2,933	58,725	20.0	5,544	109,664
Fuel oil	467	20,200	43.3	2,231	47,354
District heat	48	5,964	124.9	808	17,326
District chilled water	54	4,608	85.4	665	12,725
Propane	510	7,706	15.1	583	13,179
Other	172	3,826	22.2	301	6,452
Space-heating energy sources (more than one may apply)					
Electricity	2,858	49,030	17.2	3,898	86,351
Natural gas	2,612	49,511	19.0	4,446	85,944
Fuel oil	270	4,351	16.1	360	8,473
District heat	48	5,925	124.3	804	17,232
Propane	342	3,067	9.0	151	3,604
Other	101	1,010	10.0	48	1,162
Primary space-heating energy source					
Electricity	1,819	26,205	14.4	1,846	45,007
Natural gas	2,322	42,988	18.5	3,871	74,273
Fuel oil	205	2,542	12.4	187	5,022
District heat	47	5,797	122.9	794	17,056
Propane	261	1,948	7.5	63	1,663
Other	67	598	8.9	21	583

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All buildings	5,557	87,093	15.7	6,963	149,059
Cooling energy sources (more than one may apply)					
Electricity	4,413	76,034	17.2	6,322	136,319
Natural gas	12	732	61.5	97	1,627
District chilled water	54	4,608	85.4	665	12,725
Water-heating energy sources (more than one may apply)					
Electricity	2,658	42,755	16.1	3,102	72,423
Natural gas	1,758	39,523	22.5	4,029	77,507
Fuel oil	77	1,911	24.7	174	4,349
District heat	25	4,551	179.7	652	13,755
Propane	142	1,575	11.1	87	2,562
Cooking energy sources (more than one may apply)					
Electricity	1,010	25,151	24.9	2,511	52,305
Natural gas	740	24,770	33.5	3,015	58,012
Propane	144	2,001	13.9	167	4,512
Energy end uses (more than one may apply)					
Buildings with space heating	4,722	80,078	17.0	6,782	143,605
Buildings with cooling	4,461	79,294	17.8	6,774	144,768
Buildings with water heating	4,423	79,015	17.9	6,798	144,637
Buildings with cooking	1,589	38,546	24.3	4,079	83,495
Buildings with manufacturing	259	5,078	19.6	360	7,891
Buildings with electricity generation	410	25,642	62.5	2,803	57,892
Percent of floorspace heated					
Not heated	835	7,015	8.4	181	5,454
1 to 50	697	10,130	14.5	468	11,572
51 to 99	727	14,650	20.2	1,298	28,357
100	3,298	55,298	16.8	5,016	103,676
Percent of floorspace cooled					
Not cooled	1,096	7,799	7.1	189	4,291
1 to 50	1,173	18,891	16.1	989	20,397
51 to 99	897	22,728	25.3	2,143	46,520
100	2,391	37,676	15.8	3,642	77,851
Percent lit when open					
Zero	70	322	4.6	4	135
1 to 50	1,099	12,628	11.5	642	13,891
51 to 99	1,666	34,814	20.9	3,049	63,760
100	2,222	35,726	16.1	3,244	70,791
Building never open/electricity not used	501	3,603	7.2	24	482

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All buildings	5,557	87,093	15.7	6,963	149,059
Percent lit during off hours					
Zero	2,489	24,746	9.9	1,293	30,433
1 to 50	2,441	50,753	20.8	4,346	91,998
51 to 100	202	6,926	34.3	1,018	19,923
Building always open with no "off hours"	102	2,443	23.9	306	6,705
Electricity not used	323	2,225	6.9	N	N
Heating equipment (more than one may apply)					
Heat pumps	628	11,846	18.9	899	20,389
Furnaces	755	8,654	11.5	615	12,617
Individual space heaters	1,247	20,766	16.6	1,572	33,023
District heat	48	5,925	124.3	804	17,232
Boilers	544	22,443	41.3	2,262	43,404
Packaged heating units	2,802	49,188	17.6	4,083	86,846
Other	62	1,574	25.5	191	3,924
Cooling equipment (more than one may apply)					
Residential-type central air conditioners	1,546	14,765	9.5	1,086	23,162
Heat pumps	692	12,538	18.1	939	21,321
Individual air conditioners	709	12,420	17.5	1,013	21,552
District chilled water	54	4,608	85.4	665	12,725
Central chillers	163	17,041	104.6	1,853	38,074
Packaged air conditioning units	1,909	45,153	23.6	3,972	84,882
Swamp coolers	109	1,918	17.5	176	3,620
Other	Q	328	Q	45	1,009
Main equipment replaced since 1990 (more than one may apply)					
Heating	1,874	27,558	14.7	2,164	45,544
Cooling	1,971	30,702	15.6	2,521	54,227
Water-heating equipment					
Centralized system	3,348	47,534	14.2	4,210	88,167
Distributed system	690	12,688	18.4	832	19,356
Combination of centralized and distributed system	385	18,793	48.8	1,756	37,115

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All buildings	5,557	87,093	15.7	6,963	149,059
Lighting equipment types (more than one may apply)					
Incandescent	1,826	38,406	21.0	3,540	72,871
Standard fluorescent	4,649	80,081	17.2	6,714	143,245
Compact fluorescent	2,302	53,816	23.4	5,094	106,552
High-intensity discharge (HID)	525	23,396	44.5	2,187	45,359
Halogen	905	28,059	31.0	2,695	56,323
LED	473	22,071	46.6	2,363	49,526
Other	10	446	45.2	59	1,288
Refrigeration equipment (more than one may apply)					
Any refrigeration	3,984	73,645	18.5	6,471	137,069
Walk-in units	811	28,361	35.0	3,525	71,295
Cases or cabinets	915	28,719	31.4	3,316	68,861
Large cold storage areas	78	4,171	53.4	530	10,736
Commercial ice makers	846	32,734	38.7	3,731	75,848
Residential-type or compact units	3,388	62,381	18.4	5,183	109,536
Vending machines	960	43,936	45.8	4,178	87,026
No refrigeration	1,573	13,448	8.5	492	11,990
Office equipment (more than one may apply)					
Desktop computers	3,977	77,063	19.4	6,586	140,644
With flat screen monitors	3,847	76,160	19.8	6,523	139,323
With multiple monitors	911	30,946	34.0	2,942	62,497
Laptop computers	2,730	63,486	23.3	5,466	116,037
Dedicated servers	1,748	53,369	30.5	4,784	102,388
Laser printers	2,339	54,256	23.2	4,795	101,943
Inkjet printers	2,187	36,235	16.6	2,903	63,200
FAX machines	3,185	66,682	20.9	5,706	122,287
Photocopiers	2,163	59,277	27.4	5,110	108,985
Number of desktop computers					
None	1,581	10,030	6.3	377	8,415
1 to 4	2,039	15,669	7.7	1,184	25,282
5 to 9	821	9,422	11.5	738	15,649
10 to 19	482	9,388	19.5	676	15,507
20 to 49	355	13,094	36.9	1,121	23,764
50 to 99	143	8,284	57.8	645	13,985
100 to 249	92	9,728	105.6	961	19,760
250 or more	44	11,478	258.3	1,261	26,697

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All buildings	5,557	87,093	15.7	6,963	149,059
Number of laptop computers					
None	2,827	23,607	8.4	1,497	33,022
1 to 4	1,944	21,161	10.9	1,516	32,556
5 to 9	350	8,345	23.9	698	14,898
10 to 19	181	8,343	46.0	719	15,453
20 to 49	144	9,643	67.2	907	18,640
50 to 99	58	5,234	91.0	506	10,692
100 to 249	35	5,217	150.9	525	10,633
250 or more	20	5,542	280.8	596	13,165
Number of dedicated servers					
None	3,809	33,724	8.9	2,179	46,671
1 to 4	1,562	34,097	21.8	2,718	58,557
5 to 9	97	6,241	64.3	565	11,694
10 to 19	50	5,711	113.6	593	13,085
20 to 49	25	3,758	147.4	396	8,074
50 or more	13	3,562	271.4	512	10,978
Number of photocopiers					
None	3,394	27,816	8.2	1,854	40,074
One	1,325	17,080	12.9	1,202	25,620
2 to 4	648	20,312	31.4	1,596	34,204
5 to 9	116	8,863	76.7	784	16,569
10 or more	75	13,022	174.7	1,527	32,592
Number of TVs or video displays					
None	2,718	24,339	9.0	1,214	27,735
One	1,145	9,990	8.7	697	14,677
2 to 4	1,035	16,465	15.9	1,311	28,609
5 to 9	314	8,148	25.9	777	17,015
10 to 19	154	8,168	53.1	810	16,990
20 to 49	106	8,058	76.1	717	16,023
50 to 99	48	4,378	90.9	432	8,966
100 or more	37	7,547	201.5	1,006	19,044
Food preparation or serving areas in non-food service buildings (more than one may apply)					
Snack bar or concession stand	153	9,884	64.6	1,112	22,669
Fast food or small restaurant	173	9,787	56.5	1,206	25,388
Cafeteria or large restaurant	130	15,222	117.1	1,624	32,102
Commercial kitchen/food preparation area	282	16,150	57.2	1,798	35,118
Small kitchen area	736	14,054	19.1	1,187	24,674

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All buildings	5,557	87,093	15.7	6,963	149,059
Separate computer areas (more than one may apply)					
Data center or server farm	97	11,105	115.1	1,356	28,418
Computer-based training room	244	17,723	72.7	1,696	35,069
Student or public computer center	238	14,341	60.1	1,275	24,649
HVAC conservation features (more than one may apply)					
Economizer cycle	601	30,749	51.2	3,142	64,942
Regular HVAC maintenance	3,178	69,244	21.8	6,203	131,733
Building automation system (BAS) ²	781	37,051	47.5	3,709	78,304
Window and interior lighting features (more than one may apply)					
Multipaned windows	3,012	60,362	20.0	5,250	109,145
Tinted window glass	1,875	45,025	24.0	3,973	83,408
Reflective window glass	549	15,908	29.0	1,652	34,327
External overhangs or awnings	1,867	32,188	17.2	3,089	64,414
Skylights or atriums	591	22,261	37.6	2,010	41,021
Light scheduling	918	30,263	33.0	2,930	63,371
Occupancy sensors	813	35,871	44.1	3,434	72,679
Multi-level lighting or dimming	349	14,534	41.7	1,618	32,911
Daylight harvesting	125	6,114	48.8	619	13,036
Demand responsive lighting	176	4,738	26.9	410	9,636
Building automation system (BAS) for lighting ²	208	12,068	57.9	1,201	26,570
Equipment usage reduced when building not in full use (more than one may apply)					
Heating	3,699	63,167	17.1	5,022	108,440
Cooling	3,517	62,516	17.8	5,008	108,878
Lighting	4,757	78,594	16.5	6,426	137,435.0

¹These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

²In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)*.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: • Because of rounding, data may not sum to totals. • See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from <http://www.eia.gov/consumption/commercial/data/2012/>. • Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. • HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.